NEW ABSTRACT

A method of cleaning at least one surface of an optical device disposed in a vacuum chamber, which is at least partially contaminated by atoms and/or ions of metalloid and/or metal introduced by a radiation source generating, such as extreme ultraviolet radiation and/or soft X-rays is described. In order to achieve a longer service life for the optical device, the method is designed such that a temperature prevailing on the surface and/or a pressure in the vacuum chamber is adjusted in such a way that the atoms and/or ions hitting the surface are removed.